

REMARKS/ARGUMENTS

1. Claims 1, 3-5 and 10 are rejected under 35 U.S.C. §102(e) as anticipated by Goedgebuer et al. This basis for rejection is traversed, because Goedgebuer et al. do not meet the limitations of claim 1 as originally filed or as amended.

2. More particularly, Goedgebuer et al. is capable of operating only on an analog signal, and not on a digital signal. This can be verified generally by noting that nowhere do Goedgebuer et al. mention digital signals at all. This limitation of Goedgebuer et al. to analog signals may be further verified by noting that at column 5, lines 16 to 21 the "sender" unit of FIGURE 4 modulates the laser diode energy in proportion to the electrical control signal. Further, at column 5, lines 51 to 59 Goedgebuer et al. state that the luminous intensity of the laser diode is governed by a non-linear differential equation with delay which depends upon equation (3), which includes a  $\frac{d}{dt}s(t)$  term, representing the rate of change of the luminous intensity of the applied signal. The rate of change of signal amplitude is not meaningful in the context of a digital signal. As currently amended, claim 1 recites inter alia

"A method for encrypting digital data for transmission over a channel, where said digital data defines a symbol sample duration, said method comprising the steps of:

delaying said digital data by at least one delay increment equal to one symbol sample duration, optionally divided by an integer, to thereby generate

a plurality of time-sequential signal samples;" which is not found in Goedgebuer et al., since Goedgebuer et al. is an analog system. Thus, claim 1 as amended clearly distinguishes over Goedgebuer et al., and should be patentable in a § 102 sense.

Claims 2-13 dependent from claim 1 should also be patentable over the cited art, as depending from a patentable parent claim.

3. Claims 2, 6, 7, 8, 9, and 11-13 are rejected under 35 U.S.C. §103(a) as being unpatentable over Goedgebuer et al. in combination with other references. As described above in relation to the §102 rejection, claim 1 distinguishes thereover. No combination of Goedgebuer et al. as a principal reference together with other references can be identical to what is recited in claim 1 as amended, and therefore claims 2, 6, 7, 8, 9, and 11-13 are patentable in a §103 sense over Goedgebuer et al. with any other reference.

Further, claims dependent on claim 1 are patentable as being dependent on a patentable parent claim.

4. New claim 14 is similar to original claim 1, with the difference that the nonlinearity has been limited to a phase nonlinearity

"operating on each of said time-sequential signal samples by one of said keys which is a nonlinear transfer function, to thereby generate, at any instant, a plurality of phase distorted samples of said signal;"

which is not found in Goedgebuer et al. This may be verified by noting that Goedgebuer et al. mention phase only at column 6, lines 1-6, and the phase there adverted to is an "arbitrary" phase-shift  $M_0$  related to optimization of the interferometer. A fixed arbitrary phase shift is not a "nonlinear transfer function" as recited in the abovequoted clause which generates "phase distorted samples of said signal." Thus, new claim 14 distinguishes over Goedgebuer et al. and is patentable thereover. New claim 15 is patentable over Goedgebuer et al. or any combination of references in which Goedgebuer et al. is the principal reference.

5. New claim 15 is similar to original claim 1, with the difference being that the recitations include a limitation to a non-feedback system. The Goedgebuer et al. system is clearly feedback, and additionally it does not operate on digital signals. Thus, new claim 15 is patentable over Goedgebuer et al. or any combination of references in which Goedgebuer et al. is the principal reference.

6. Reconsideration and allowance are requested.

7. The number of claims after the amendment is no greater than the number originally paid for, so no fee is believed to be required. Please charge any other fees to deposit account 50-2061.

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